ROKHLIN, I.N.

Accelerated method of determining long-period strength, based on the measurement of thickness. Zav.lab. 26 no.7: 850-852 '60. (MIRA 13:7)

1. Khar'kovskiy turbinnyy zavod im. Kirova.
(Strength of materials) (Thickness measurement)

AID P - 4382

Subject : USSR/Power Engineering

Card 1/1 Pub. 110 a - 8/17

Author : Rokhlin, I. N., Eng. Khar'kov Turbine Plant

Title : Relaxation of 50KhFA steel springs and a method for its increase.

Periodical : Teploenergetika, 5, 40-42, My 1956

Abstract : The strength data of the 50KhFA type steel springs are presented. The resilience of the springs at temperatures above 300°C is considered unsatisfactory. The method of testing by "preventive loading" at 300° to 350°C temperatures is described in detail. Reportedly, the treatment discussed improves relaxation properties of springs. Two diagrams, 4 tables.

Institution : None

Submitted : No date

ROKHLIN, I-N

✓ 9808* Relaxation Resistance of Springs of Steel 50 KhFA and a Method for Increasing It. Relaksatsionnaia stoikost' pruzhin stali 50 KhFA i metod ee povyshenila. (Russian.) I. N. Rokhlin. *Teploenergetika*, v. 3, no. 5, May 1956, p. 40-42.

At temperatures above 300 C this steel has low relaxation resistance, despite high yield point. Method of preloading to increase relaxation resistance for temperature of 300 to 350 C. Tables, graphs. 3 ref.

ROKHLIN, I.N., inzhener.

Relaxation strength of springs from 50KhFA steel and a method for increasing it. Teploenergetika 3 no.5:40-42 My '56. (MIRA 9:7)

1.Khar'kovskiy turbinnyy zavod.
(Springs (Mechanism) (Creep of metals)

ROKHLIN, L.I.

Effectiveness of using electric prospecting in hydrogeological investigations. Razved. i okh.nedr 31 no.4:31-34 Ap '65. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii, Moskva.

SOV/137-58-7-15690

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 254 (USSR)

AUTHORS: Gorelik, S. S., Rozenberg, V. M., Rokhlin, L. L.

TITLE: Effect of Some Soluble and Insoluble Additives Upon the Recrystallization of Nickel (Vliyaniye nekotorykh rastvorimykh i nerastvorimykh primesey na rekristallizatsiyu nikelya)

PERIODICAL: Sb. tr. In-t metalloved. i fiz. metallov Tsentr. n.-i. in-ta chernoy metallurgii, 1958, Nr 5, pp 522-527

ABSTRACT: The time of the beginning of recrystallization τ_n was determined by the X-ray method, and the energy of activation of the beginning of recrystallization Q_n was calculated for pure and technical Ni 60% reduced by cold rolling and annealed at 290-600°C and also for its alloys with 2-3.5% Ti and 0.4% C. A very strong effect of the degree of purity of the Ni upon τ_n and Q_n is noted, also a considerable increase of surface energy due to the impurities. It is indicated than an addition of 2-3% Ti to technical Ni produces a certain increase in τ_n. The presence of coagulated carbides in one of the alloys decreased somewhat the effect of Ti on τ_n. The peculiarities of recrystallization of such alloys are explained by an increase

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SOV/137-58-7-15690

Effect of Some Soluble and Insoluble Additives (cont.)

within them of the forces of interatomic reaction upon the introduction of Ti and the appearance of deformations in the crystalline lattice upon the coagulation of the carbides.

A. B.

1. Nickel alloys--Crystallization 2. Nickel alloys--X-ray analysis
3. Alloys--Metallurgical effects

Card 2/2

SOV/180-59-3-28/43

AUTHORS: Drits, M.Ye., Mal'tsev, M.V. and Rokhlin, L.L. (Moscow)

TITLE: Investigation of Alloys of the Ternary Magnesium-Manganese-Calcium System

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 3, pp 142-144(USSR)

ABSTRACT: The magnesium corner of the ternary diagram was investigated for up to 2% Mn or Ca. The alloys were prepared from 99.91% Mg, and Mg-Ca and Mg-Mn master alloys. They were cast in metal moulds. Samples were homogenised at 480°C for 100 hours. They were then heated to various temperatures for long periods and quenched in water. Typical structures obtained are shown in Fig 1: a is α solid solutions, b is α + β(Mn), c is α + Mg_2Ca, and d is α + Mg_2Ca + β(Mn). Micro-hardness measurements were taken. Results were Mg_2Ca - 108 kg/mm^2 and Mn - 994 kg/mm^2. Thermal analysis showed that there is a peritectic reaction at 553°C:- liquid + β(Mn) $\rightleftarrows$ α + Mg_2Ca. Isothermal and polythermal sections are given in Fig 2 and 3 respectively. It can be seen that a decrease in temperature results in a decrease in the range of α solid solution and of

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SOV/180-59-3-28/43

Investigation of the Alloys of the Ternary Magnesium-Manganese-Calcium System

α + β(Mn) and α + Mg_2Ca regions. There are 3 figures and 5 references, 2 of which are Soviet, 2 German and 1 English.

SUBMITTED: November 24, 1958

Card 2/2

67806

18.1210

SOV/180-59-5-23/37

AUTHORS: Drits, M.Ye., Rokhlin, L.L., and Sviderskaya, Z.A. (Moscow)

TITLE: Influence of Deformation in the Cold State on the Properties of Alloys of the System Al-Mg_2Si in the Artificially Aged State

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 5, pp 132-135 (USSR)

ABSTRACT: Data are given on the influence of deformation in the cold state on the properties of alloys in the pseudo binary section Al-Mg_2Si for various contents of the intermetallic compound. Alloys of this system age appreciably during hardening. The alloys for the experiments were produced from pure (99.985%) aluminium; silicon, and magnesium were introduced in the form of alloys produced from the same type of aluminium. The specimens used in the mechanical tests were produced by turning from brass rods of 10.5 mm diameter. After hardening and natural ageing for six days, the specimens were work hardened by stretching to obtain 1, 5 and 10% residual deformation. The work-hardened specimens were subjected to artificial ageing at 170 °C for six hours.

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Influence of Deformation in the Cold State on the Properties of Alloys of the System Al-Mg_2Si in the Artificially Aged State

The conditions of artificial ageing were chosen on the basis of hardness measurements, the results of which are graphed in Fig 1, p 133. The tensile tests were carried out with a load of 2000 kg. The graphs, Figs 2, 3 and 4, characterise the changes in the properties of the investigated alloys as a result of the work hardening. It can be seen that in all the tested specimens, including those of pure aluminium, an increase in the degree of deformation in the cold state leads to an increase in the strength and yield point and to a decrease in the relative elongation. The observed changes of the yield point and elongation are considerably more pronounced than the changes in the strength of the alloys. According to the published equilibrium diagram of the investigated system, the concentration of solid solution at the eutectic temperature amounted to 1.85% Mg_2Si, and at room temperature it dropped to 0.2%. Consequently, alloys containing over 0.2% Mg_2Si can be considered as alloys which become hardened by heat treatment. The effect of ageing (change in the

Influence of Deformation in the Cold State on the Properties of Alloys of the System Al-Mg_2Si in the Artificially Aged State

hardness) on alloys containing various quantities of the intermetallic component Mg_2Si, is illustrated by the graph Fig 1. The data obtained indicate that the effect of work hardening is greatest on ageing alloys containing 0.7 to 1.5% Mg_2Si. In alloys containing an excess second phase (2 and 4% Mg_2Si), the effect of work hardening will be less pronounced. For pure aluminium and for low-alloy alloys (0.2% Mg_2Si) the changes in the mechanical properties with increasing deformation in the cold state will be smaller still. However, the changes in the properties of these alloys indicate that the structural changes brought about by the cold deformation process itself are not entirely eliminated during subsequent ageing. Apparently they remain conserved even in ageing alloys which are richer as regards the second phase. The rate of change in the mechanical properties with increasing degree of cold working of alloys which have been hardened by heat treatment indicates that deformation in the cold state also influences the process of subsequent ageing.

Card 3/5

Influence of Deformation in the Cold State on the Properties of Alloys of the System Al-Mg_2Si in the Artificially Aged State

In a table on p 134 the measured electrical resistance is given for one of the alloys of the system, containing 1.5% Mg_2Si, which was subjected to various degrees of cold working and artificial ageing at 170 °C for durations of 0 to 4 hours. It can be seen from these data that with increasing time of artificial ageing, the electrical resistance of preliminarily deformed alloys drops considerably faster than it does for the same alloy in the non-deformed state; the higher the degree of work hardening, the lower were the electric resistance values for a given temperature and duration of ageing. Thus for the artificial ageing conditions selected by the authors (170 °C, six hours) cold working of the hardened alloys brings about an appreciable acceleration of the decomposition of the Mg_2Si solid solution in aluminium. Obviously an increase in the degree of decomposition of the solid solution at the given conditions of ageing is also a factor which brings about an increase in the strength

67806

SOV/180-59-5-23/37

Influence of Deformation in the Cold State on the Properties of Alloys of the System Al-Mg_2Si in the Artificially Aged State

characteristics of the alloys and a decrease in their plasticity.
There are 4 figures, 1 table and 8 references, of which 5 are Soviet, 2 are English and 1 is Italian.

SUBMITTED: January 23, 1959

Card 5/5

Rokhlin, L.L.

PHASE I BOOK EXPLOITATION SOV/3062

Akademiya nauk SSSR. Institut metallurgii

Issledovaniye splavov tsvetnykh metallov; sbornik 2 (Analysis of Nonferrous Metal Alloys; Collection of Articles, [No.] 2) Moscow, Izd-vo AN SSSR, 1960. 204 p. Errata slip inserted. 2,800 copies printed.

Ed.: I.A. Oding, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: V.S. Rzheznikov; Tech. Ed.: I.F. Polenova; Editorial Board: A.A. Bochvar, Academician; M.Ye. Drits, Candidate of Technical Sciences (Deputy Resp. Ed.); N.V. Zakharov, Professor, Doctor of Technical Sciences; E.S. Kadaner, Candidate of Technical Sciences (Resp. Secretary); A.M. Korol'kov, Doctor of Technical Sciences; M.V. Mal'tsev Professor, Doctor of Technical Sciences; and Z.A. Sviderskaya, Candidate of Technical Sciences.

PURPOSE: This collection of articles is intended for workers in scientific research institutes, metal and machine works, for teaching personnel, and for students attending schools of higher education.

COVERAGE: This is the second volume in a series of works on nonferrous and light-metal alloys prepared by the Institut metallurgii imeni A.A. Baykova AN SSSR (Institute of Metallurgy imeni A.A. Baykov of the Academy of Sciences USSR), and the Moskovskiy institut tsvetnykh metallov i zolota imeni M.I. Kalinina (Moscow Institute of Nonferrous Metals and Gold imeni M.I. Kalinin). The problems discussed concern the casting and physical metallurgy of nonferrous alloys. The effect of alloying and deformation on the properties of various alloys, and the problems connected with the study of the casting properties and with the plotting of phase diagrams for nonferrous alloys are discussed. No personalities are mentioned. References accompany most of the articles.

SVIDERSKAYA, Z.A., kand.tekhn.nauk; DRITS, M.Ye., kand.tekhn.nauk;
VASHCHENKO, A.A.; ROKHLIN, L.L.

Effect of cold deformation on the properties of certain aluminum alloys hardened by heat treatment. Issl.splav.tsvet. met. no.2:67-71 '60. (MIRA 13:5)
(Aluminum alloys--Cold working)

SVIDERSKAYA, Z.A., kand.tekhn.nauk; ROKHLIN, L.L.

Effect of cold deformation on the mechanical properties of Al-1.50% Mg_2Si in various conditions of aging. Issl.splav. tsvet.met. no.2:84-91 '60. (MIRA 13:5)
(Aluminum alloys--Cold working)

DRITS, M.Ye.; SVIDERSKAYA, Z.A.; ROKHLIN, L.L.

Investigating the characteristics of the manganese phase of certain manganese-base alloys. Trudy Inst.met. no.5:85-94 '60.
(MIRA 13:6)

(Manganese alloys--Metallography)

DRITS, M.Ye.; SVIDERSKAYA, Z.A.; ROKHLIN, L.L.

Role of addition elements in the hardening of alloys in the system Mg - Mn - Al - Ca at high temperatures. Trudy Inst. met. no.8:111-119 '61. (MIRA 14:10)
(Magnesium-manganese-aluminum alloys--Hardening)
(Metals at high temperatures)

S/806/62/000/0

AUTHORS: Drits, M. Ye., Sviderskaya, Z. A., Rokhlin, L. L.

TITLE: Investigation of the decomposition of a supersaturated solid solution of neodymium in magnesium.

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniye splavov tsvetnykh metallov. no.3. 1962, 68-74.

TEXT: The paper describes an experimental investigation of the decomposition of the supersaturated solid solution of Nd in Mg during artificial aging after quenching, a procedure which yields maximal hardness at room T and up to 250°C. Because of the substantial chemical similarity of the rare-earth elements having an identical structure of the outer electron shells, the investigation of the aging behavior of Nd was made in comparison with that of the widely utilized Ce. The two comparison alloys were prepared in an electric resistance furnace with steel crucibles. Two Nd-containing alloys (1.1% Nd and 2% Nd) and a 2.4%-Ce alloy were prepared. Rods 10.5-mm diam were hot-extruded; the Mg-Nd alloys were quenched at 535°C, the Ce alloy at 575°. The pre-quench heating was performed by 4-hr soaking in a sulfurous atmosphere. The study of the aging process comprised a comparison of the changes in hardness (H_V), specific electrical resistance, and

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microstructure. X-ray metallography was not effective since the formation of the Mg-Nd solid solution produces only a relatively small change in lattice parameter because of the small solubility (in at.-%) of Nd in Mg. 2- to 100-hr aging of the 1.1% Nd alloy was performed at 150, 175, 200, 250, and 300°C. Curves reveal a H_V maximum at a fairly constant H_V level up to 200°, but which is attained after aging times that decrease with increasing T, and with H_V values decreasing both in value and in time of attainment at higher T. The resistance (R) measurements show a drop in R with aging time and an increase in steepness of the drop with aging T. This drop in R is attributed to a segregation from the supersaturated solid solution of particles of a second Nd-rich phase. No "first-stage" aging phase accompanied by an increase in R, comparable to that of Al alloys, is observed. Verification tests comparing the hardness and the R of specimens aged at room T and briefly at 150°C showed that an increase in H_V occurred only in conjunction with a drop in R, which indicates that in the aging of Mg-Nd alloys the hardening is attributable solely to the segregation of crystals of a Nd-rich phase from the supersaturated solid solution. Microscopically the segregation of the second-phase particles required much more time to become evident than did the R-drop indication. The first Nd-rich crystals appeared predominantly along the grain boundaries, but subsequent crystals could be identified even within the solid-solution crystals. The growth of the crystals became more pronounced with increasing T and lengthening aging time; it was more

S/509/62/000/011/009/019
E071/E351

AUTHORS: Drits, M.Ye., Sviderskaya, Z.A., Rokhlin, L.L., Padezhnova, Ye.M. and Yakovleva, L.I.

TITLE: The relationship between strength at elevated temperature and composition of magnesium-base alloys

SOURCE: Akademiya nauk SSSR. Institut metallurgi. Trudy. no. 11. Moscow, 1962. Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody issledovaniya. 124 - 132

TEXT: A study of the relationship between composition and strength at high temperatures for deformed and heat-treated magnesium alloys was carried out, as the only available data covered a limited number of alloys, in the cast state. The binary alloys investigated over a temperature range of 150 - 300 °C were: Mg-Al; Mg-Zn; Mg-Mn; Mg-Th; Mg-Ce; Mg-Nd and Mg-Ca. Cast ingots, after cleaning by machining, were pressed into rods, 10.5 mm in diameter, being deformed by 88%. The Mg-Al and Mg-Zn alloys were homogenized before pressing (at 400 and 340 °C, respectively) for 50-60 hours; the remaining alloys were not homogenized. The pressing temperature was 300 - 440 °C, the temperature

Card 1/3

The relationship between ....

of the container being 250 - 400 °C. Specimens prepared from these rods were hardened in water at 60 - 70 °C, Mg-Al from 415 °C, Mg-Zn from 315 °C, Mg-Mn, Mg-Th and Mg-Ce from 550 °C, Mg-Nd from 520 °C and Mg-Ca from 490 °C, following which they were stabilized at the test temperature for 100 hours. The strength-testing of the alloys at elevated temperatures was carried out by determination of the hardness under prolonged loading (hours). The results showed that the best structure for obtaining the maximum heat-resistance would be different for each system, depending on the nature of the intermetallic components. In systems having a high solubility of the alloying element in solid magnesium and marked changes in solubility with temperature, the best structure is a highly-alloyed solid solution (Mg-Al, Mg-Zn). This is particularly the case at higher temperatures. In such systems an intense development of the interactions at the inter-phase boundaries and a strong tendency to weakening in the second phase itself lead in most cases to heterogenization of the structure having little effect. In systems with a severely limited

S/509/62/000/011/009/019
E071/E351

The relationship between ....

alloying-element solubility in solid magnesium and a small change in the solubility with temperature, the strongest effects of alloying are shown by those with a structure of decomposed solid solution (Mg-Mn, Mg-Th, Mg-Ce, Mg-Nd, Mg-Ca). The appearance in the alloy structure of dispersed particles of heat-resistant secondary phases and the absence of noticeable interaction at the interphase boundaries at elevated temperatures allow heterogenization to exert a strong influence. A comparison of the authors' results and the published data show a correspondence in the nature of the relationships despite the fact that the authors' results were obtained on deformed and heat-treated materials, and the published data were for cast alloys. There are 5 figures.

Card 3/3

37734

S/180/62/000/002/013/018
E193/E383

18.1245

AUTHOR: Rokhlin, L.L. (Moscow)

TITLE: Solid solubility of neodymium and cerium in magnesium

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Metallurgiya i toplivo, no. 2, 1962, 126 - 130

TEXT: The strength of Mg-Nd alloys at elevated temperatures is higher than that of Mg alloyed with other rare-earth elements, Ce in particular. Although this effect has been attributed (Ref. 3 - N.M. Tikhova and L.A. Afanas'yeva - Metallovedeniye i obrabotka metallov, no. 3, 1958, 38) to relatively higher solid solubility of Nd in Mg, the published values of solid-solubility limits (1.6 wt. or 0.28 at.% for Ce and 1.8 - 2.0 wt.% or 0.31 - 0.34 at.% for Nd) do not support this view - hence the present investigation, in which electrical-resistance measurements were used to determine the temperature dependence of the solid-solubility limits of Mg-Nd and Mg-Ce alloys. The test pieces were prepared by prolonged heating at temperatures ranging from 200 - 580 °C, followed by water-quenching, a layer 1 mm thick

Card 1/2

Solid solubility ....

being machined-off the quenched specimens. The results are reproduced in Fig. 3, showing the Nd-rich end of the equilibrium diagrams of the Mg-Nd (graph a) and Mg-Ce (graph б) systems (temperature in °C, concentration in wt.%); the solidus lines determined by the present author by thermal analysis are in good agreement with published data. It will be seen that Nd is considerably more soluble in solid Mg than Ce, the respective solid-solubility limits being 3.6 and 0.74 wt.%. These findings provide an adequate explanation for the difference in the high-temperature properties of these two types of alloy.
There are 3 figures and 2 tables.

SUBMITTED: August 11, 1961

Card 2/2

S/149/62/000/003/006/011
A006/A101

AUTHORS: Drits, M. Ye., Sviderskaya, Z. A., Rokhlin, L.L.

TITLE: The effect of some elements upon the mechanical properties of magnesium-neodymium alloys

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, no. 3, 1962, 117 - 121

TEXT: The investigation was made with magnesium-neodymium alloys in deformed state. Grade Mg1 magnesium (99.91% Mg), magnesium-neodymium addition-alloy, and magnesium addition-alloy with other metals, were used as charge materials for preparing the alloys to be investigated. The following components were added: cadmium, lithium, aluminum, zinc, tin, bismuth, calcium, manganese, silicon, barium and cobalt. The alloys were heat-treated by quenching and artificial aging. The quenching temperature for the alloys was 535°C, with the exception of Zn and Ca (435 - 515°C). The specimens were quenched for 4 hours in sulfur dioxide atmosphere and air-cooled. Aging was performed at 175°C for 24 hours. The tests show that none of the alloying components used caused a sub-

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stantial increase of strength properties, although slight effects were observed in some cases. Cadmium and manganese raised yield strength and silicon increased ultimate strength; some strength increase was observed in alloying with cobalt. At elevated temperatures a slight increase in strength was caused by the addition of cadmium (at 200°C) and manganese, cobalt and silicon (at 300°C). The addition of lithium, barium and calcium did not change the properties of magnesium-neodymium alloys. Aluminum, tin, bismuth and zinc reduced considerably ultimate strength and yield point, and raised relative elongation. Investigations of the microstructure of deformed alloys show that the neodymium-phase crystals, observed in cast state, dissolve during quenching, and that the neodymium passes into a magnesium-base solid solution in the case when the mechanical properties are not affected or only slightly raised by the alloying admixture. A connection between the neodymium solubility, reduced by some elements, and a decrease in strength was established. This article was recommended for publication by the kafedra tekhnologii metallov (Department of Metal Techniques) at the Vsesoyuznyy zaochnyy institut tekstil'noy i legkoy promyshlennosti (All-Union Correspondence Institute of Textile and Light Industry). There are 3 tables and 2 figures.

ASSOCIATION: Institut metallurgii imeni A. A. Baykova (Institute of Metallurgy imeni A. A. Baykov)

SUBMITTED: January 2, 1962

DRITS, M.Ye. (Moskva); SVIDERSKAYA, Z.A.(Moskva); ROKHLIN, L.L. (Moskva)

Hardening of alloys in the system magneisum - neodymium by means of thermomechanical treatment. Izv. AN SSSR.Otd.tekh.nauk. Met. i topl. no.5:191-196 S-O'62. (MIRA 15:10)
(Magnesium-neodymium alloys--Hardening)

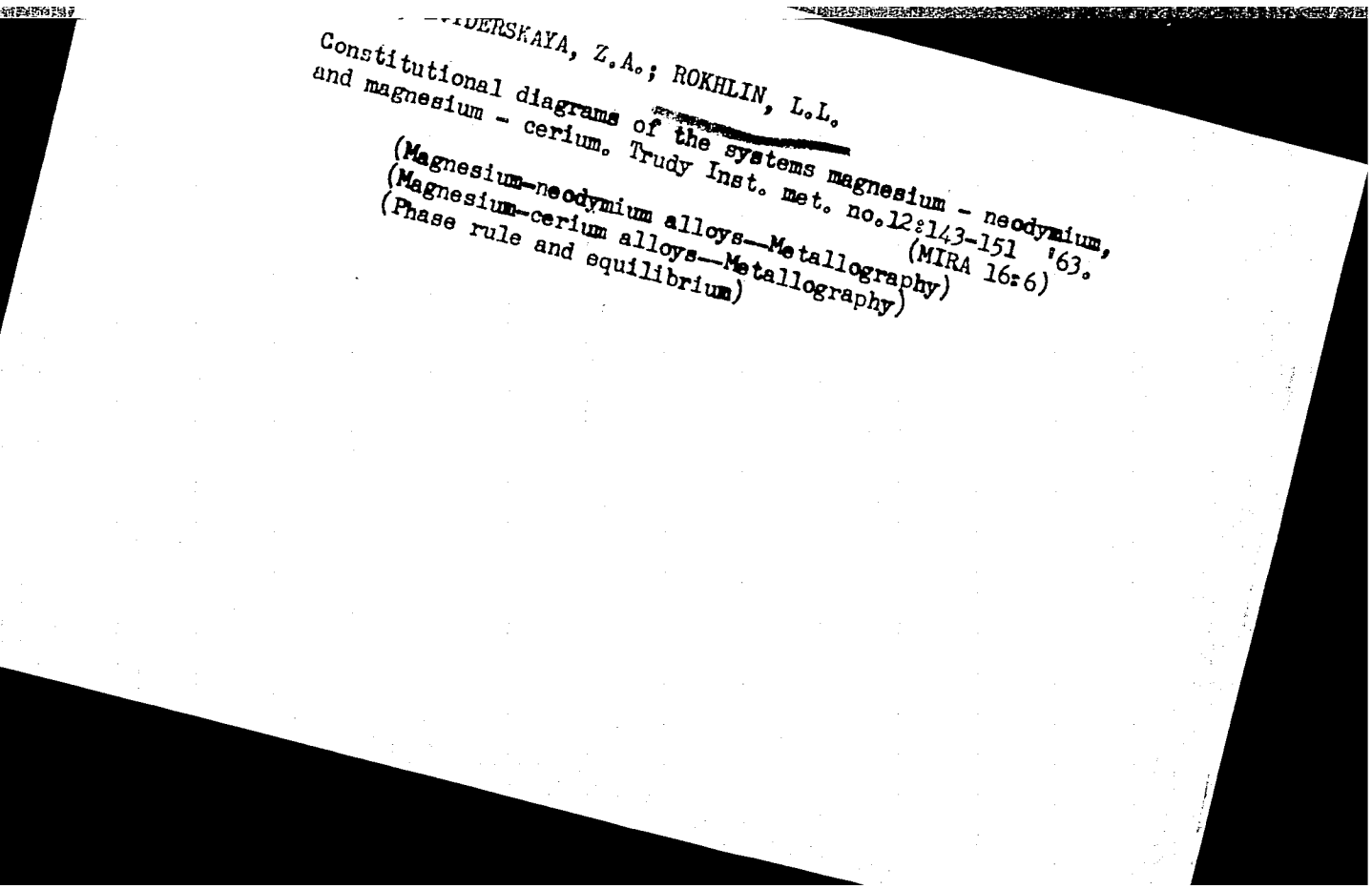
DRITS, M.Ye.; SVIDERSKAYA, Z.A.; ROKHLIN, L.L.

Study of the Mg-Nd-Mn alloys in the region adjoining the magnesium angle of the system. Zhur.neorg.khim. 7 no.12: 2771-2777 D '62. (MIRA 16:2)
(Magnesium-neodymium-manganese alloys)

DRITS, M.Ye.; SVIDERSKAYA, Z.A.; ROKHLIN, L.L.

Effect of plastic deformations on the properties and structure of aging magnesium alloys containing neodymium. Issl. splav. tsvet. met. no.4:157-170 '63. (MIRA 16:8)

(Magnesium alloys—Metallography)
(Deformations (Mechanics))



...IDERSKAYA, Z.A.; ROKHLIN, L.L.

Constitutional diagrams of the systems magnesium - neodymium, and magnesium - cerium. Trudy Inst. met. no.12:143-151 '63. (MIRA 16:6)
(Magnesium-neodymium alloys--Metallography)
(Magnesium-cerium alloys--Metallography)
(Phase rule and equilibrium)

ROKHLIN, L.L.; SVIDERSKAYA, Z.A.; VOLCHKOVA, R.P.

Effect of cold working on the mechanical properties of magnesium alloys with additions of neodymium. Trudy Inst. met. no.12:161-165 '63. (MIRA 16:6)

(Magnesium alloys—Cold working)

ACCESSION NR: AT4009498 S/2509/63/000/014/0120/0129

AUTHOR: Drits, M. Ye.; Sviderskaya, Z. A.; Rokhlin, L. L.

TITLE: Effect of additional alloying elements on the properties of alloys in the Mg-Nd system

SOURCE: AN SSSR. Institut metallurgii. Trudy*, no. 14, 1963. Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody* issledovaniya, 120-129

TOPIC TAGS: alloy, alloy mechanical property, magnesium, neodymium, magnesium alloy, magnesium neodymium alloy, magnesium neodymium manganese alloy, manganese admixture, cadmium admixture, nickel admixture, silver admixture

ABSTRACT: Magnesium-neodymium systems possess very good mechanical properties at temperatures of 200-300C, making them very useful in industry. Previous studies have shown that these properties can be improved further by the addition of zirconium to cast alloys or of elements such as Mn, Ni, Zn and Ag to deformed alloys. The present study dealt with the effect of 13 alloying elements (Cd, Li, Al, Ag, Zn, Pb, Bi, Ca, Mn, Si, Ba, Ni and Co), separately and in combination, on the mechanical properties of deformed Mg-Nd alloys. The alloys were prepared in an electric furnace under a V12 flux. After heat treatment (420-460C), the alloys

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ACCESSION NR: AT4009498

were subjected to hot pressing (88% compression), annealed in air at 535C and aged at 175C for one day. Comparison of the mechanical properties at 250C showed that individual addition of most of these elements to an Mg-Nd alloy containing 2.5% Nd had no significant effect on strength, although Co had some positive effect, the yield point was increased by Cd and Mn, and the ultimate strength was increased by Si. Addition of Al, Sn, Bi or Zn decreased the ultimate strength and yield point at 250C and increased the plasticity. Examination of the microstructure by etching with 0.5% HNO_3 also showed no effect except in the case of Al, Sn or Bi which led to the appearance of a micrograniular eutectic resulting from a decrease in the solubility of Nd in Mg; although Zn did not change the microstructure, it decreased the melting point. When Cd, Ag or Ni were added to a Mg-Nd-Mn alloy, the first two had little effect on strength but increased the yield point at room temperature (in the case of Ag, there was no effect at 300C, while at 250C the ultimate strength decreased and the yield point increased); Ni, however, increased the ultimate strength at high temperatures, while at room temperature there was little change in strength and the yield point decreased. Essentially the same effects were produced when Cd or Ag were added to a Mg alloy containing 2.5% Nd, 1.5% Mn and 0.2% Ni, the best properties being obtained with 1.83% Cd. The microstructure of the ternary alloy was unchanged by addition of Cd, but Ag and Ni resulted in the appearance of new phases of Mg_2Ni and Mg_3Ag. "Engineer

Card 2/3

ACCESSION NR: AP4004691 S/0126/63/016/005/0703/0709

AUTHOR: Rokhlin, L. L.

TITLE: Effect of strain hardening on decomposition of magnesium-neodymium solid solution

SOURCE: Fizika metallov i metallovedeniye, v. 16, no. 5, 1963, 703-709

TOPIC TAGS: magnesium neodymium system, magnesium neodymium alloy, magnesium neodymium solid solution, solid solution, solid solution decomposition, alloy property, alloy structure, alloy strain hardening, magnesium neodymium alloy property, magnesium neodymium alloy structure, alloy structure, alloy property

ABSTRACT: Magnesium alloys containing neodymium have high mechanical resistance at room and elevated temperatures. The effect of plastic deformation on the decomposition of solid Mg-Nd solutions was studied by measurements of electrical resistance and X-ray diffraction. Figure 1 in the Enclosure illustrates the resistance of a solid solution of 2.54% Nd in Mg after aging of the sample at 200C for 2-100 hours. X-ray diffraction patterns showed a fully recrystallized structure after the specimen was thermally hardened. A strain deformation of 10% changed the solid solution lattice. The thermal stability of the deformed crystal lattice due to the strain hardening was studied on a

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ACCESSION NR: AP4004691

sample containing 3.38% Nd. Partial recrystallization was observed after aging the specimen at 450 C. A study of the microstructure revealed boundaries in the completely recrystallized grains of the solid solution before the specimen was subjected to strain hardening. Strain hardening caused breaking and deformation of the crystals, with characteristic twinning. In the specimen with no strain deformation, crystals of Mg_9Nd separated from the solution inside the grains and along the grain boundaries in the form of prolonged chains. The specimens subjected to strain hardening also showed Mg_9Nd crystals along the twin boundaries. The authors conclude that strain hardening speeds up the decomposition of the solid solution of Nd in Mg. The deformation of the crystal lattice due to strain hardening is very stable and remains until all the Nd is removed from the solid solution. The deformation disappears only when the second-phase particles coagulate. "The author thanks M. Ye. Drits and A. A. Sviderskaya for their advice in carrying out the work, and L. N. Guseva for her valuable advice in the structural analysis of the alloys." Orig. art. has: 6 figures

Card 2/2 3

ACCESSION NR: AP4004691

ASSOCIATION: Institut metalurgii im. A. A. Baykova (Institute of Metallurgy)

SUBMITTED: 23Dec62 DATE ACQ: 03Jan64 - ENCL: 01

SUB CODE: ML,MA NO REF SOV: 014 OTHER: 002

Card 3/4

ROKHLIN, L.L. (Moskva)

Critic of the concept of psychosomatic medicine. Zhur. nevr. i psikh. 63 no.8:1252-1255 '63. (MIRA 17:10)

[illegible], T.I.; [illegible], V.M., [illegible], prof., red.; [illegible], T.I., prof., r[illegible]

[Ways and methods of studying neuropsychic diseases; clinical statistical research] Puti i metody izucheniia nervno-psikhicheskoi zabolevaemosti; kliniko-statisticheskoe issledovanie. Moskva, Gos. nauchno-issl. in-t psikhiatrii, 1962. 197 p. (MIRA 18:2)

L 23250-65 EWT(m)/EPR/T/EWP(t)/EWP(b) Ps-4 IJP(c) JD/JG/MLK
ACCESSION NR: AT4046821 S/0000/64/000/000/0083/0087

AUTHOR: Drits, M. Ye.; Sviderskaya, Z. A.; Rokhlin, L. L. 81

TITLE: The mechanism of the plastic deformation of magnesium and neodymium alloys under conditions of continuous and short-term tension 27 27

SOURCE: AN SSSR. Nauchny*y sovet po probleme zharoprochny*kh splavov. Issledovaniya staley i splavov (Studies on steels and alloys). Moscow, Izd-vo Nauka, 1964, 83-87

TOPIC TAGS: plastic deformation, neodymium alloy, cold hardening, magnesium alloy, coherent scattering, grain boundary, slip band, twin crystal, phase crystal, crystal lattice, alloy microstructure 18

ABSTRACT: The microstructure of magnesium alloy samples with 3% neodymium was investigated at 250 and 300C under short-term and continuous tension conditions. The samples were quenched in water after heating at 535C, subjected to 5% elongation and aged at 200C for 24 hours. The dispersed Mg_9Nd particles were separated from the solid solution after aging. According to X-ray data, the second order tensions in cold-hardened samples after aging of 200C were not removed and the dimensions of the coherent scattering fields were not increased. The microstructure of cold-worked and non cold-worked samples ruptured during short-term tensile

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L 23350-65
ACCESSION NR: AT4046821

tests showed that both had a large number of twins and slip bands inside the grains. The grain boundaries were practically equal, but the Mg_9Nd phase crystals were too fine to be distinguished. The microstructure of samples tested during continuous tension was characterized by the presence of strongly coagulated Mg_9Nd phase crystals; these crystals were particularly coarse after testing at 300C. In the samples cold-worked by hardening and aging, Mg_9Nd crystals were separated out both along the grain boundaries and the twins. During testing under continuous tension, the difference in the plastic deformation of cold-worked and non cold-worked samples consisted in the degree of development of the slip process along the atomic plane of the crystal lattice. When cold-hardening was not carried out, the slipping was significant, while if it was carried out, slipping almost did not occur. Slipping plays a relatively small role in the plastic deformation during continuous tension; therefore, the increase in continuous stability as a result of cold working by hardening and aging is not great. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 16Jun64 ENCL: 00 SUB CODE: MM

NO REF SOV: 002 OTHER: 003

Card 2/2

L 12059-65 EWT(m)/EWP(w)/EWA(d)/EPR/EWP(t)/EWP(b) Ps-4 JD/JG/MLK

ACCESSION NR: AT4046002 S/0000/64/000/000/0272/0278

AUTHOR: Drits, M. Ye.; Sviderskaya, Z. A.; Rokhlin, L. L.

TITLE: Investigation of magnesium-manganese alloys

SOURCE: AN SSSR. Institut metallurgii. Issledovaniya metallov v zhidkom i tverdom sostoyaniyakh (Research on metals in liquid and solid states). Moscow, Izd-vo Nauka, 1964, 272-278

TOPIC TAGS: magnesium manganese alloy, magnesium manganese alloy property, magnesium neodymium alloy, magnesium neodymium alloy property

ABSTRACT: Several magnesium-manganese alloys with a Mn content up to 3% have been investigated as prospective structural materials for service at 400—450C. It was found that the solubility of manganese in magnesium drops with decreasing temperature from 1.9% at 630C to 0.12% at 300C (see Fig. 1 of the Enclosure). The magnesium-manganese solid solution in alloy with 2.5% Mn does not decompose at temperatures below 200C. Aging at 250—275C produces maximum hardness, 60—70 kg/mm^2. At the same time a sharp drop of electric resistivity

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ACCESSION NR: AT4046002

0

occurs. With aging at temperatures over 275C, the hardness decreases and the electric resistivity, after reaching its minimum, begins to rise again. The strengthening phase which precipitates during aging was found to be manganese or a manganese-base solid solution. In an alloy with 2.5% Mn, the decomposition of solid solution occurs at higher temperatures and has a lower strengthening effect than that in a magnesium alloy with 2% Nd. The lower strengthening effect of aging in magnesium-manganese alloys is explained by a lower content of the strengthening phase: 0.44% (by volume) in the magnesium alloy with 2.5% Mn compared to 3.6% in the alloy with 2% Nd. The strength of magnesium alloy with 1.55% Mn at temperatures up to 300—350C, i.e., 8—10 kg/mm^2 at 250C and 7—8 kg/mm^2 at 300C, was found to be lower than that of the Mg-Nd alloy with 2.98% Nd, i.e., 17—18 kg/mm^2 at 250C and 11—12 kg/mm^2 at 300C. At 400C, however, the strengths of both indicated alloys were found to be approximately identical. Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: none

L 12059-65

ACCESSION NR: AT4046902

SUBMITTED: 18May64 ATD PRESS: 3122 ENCL: 01

SUB CODE: MM NO REF SOV: 011 OTHER: 006

Card 3/4

L 12059-65

ACCESSION NR: AT4046002

ENCLOSURE: 01

6

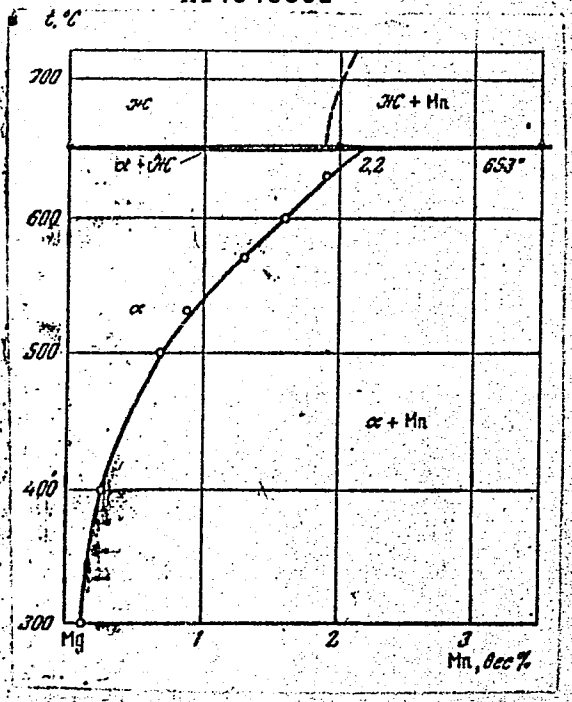

Fig. 1. Phase diagram of the Mg-Mn alloy

o - solubility of manganese in magnesium in solid state
● - thermal analysis data

Card 4/4

SVIDERSKAYA, Zoya Andreyevna; ROKHLIN, Lazar' Leonovich; DRITS, M.Ye., doktor tekhn. nauk, otv. red.; CHERNOV, A.N., red.

[Magnesium alloys containing neodymium] Magnievye splavy, soderzhashchie neodim. Moskva, Nauka, 1965. 137 p. (MIRA 18:7)

L 45463-65 EPR/EWP(k)/EWP(z)/EWA(c)/EWT(m)/EWP(b)/EWA(d)/EWP(t) Pf-4/Ps-4
IJP(c) MJW/JD/HW
ACCESSION NR: AP5009273 UR/0370/65/000/001/0160/0165

AUTHOR: Sviderskaya, Z. A. (Moscow); Rokhlin, L.L. (Moscow); Gur'yev, I.I. (Moscow); Oreshkina, A.A. (Moscow)

TITLE: Influence of plastic deformation between the operations of quenching and aging on the properties and structure of magnesium alloy MA5

SOURCE: AN SSSR. Izvestiya. Metally, no. 1, 1965, 160-165

TOPIC TAGS: magnesium alloy, aluminum containing alloy, plastic deformation, alloy strength, alloy heat treatment, alloy structure, alloy plasticity, work hardening, alloy conductivity

ABSTRACT: The authors studied the possibility of using plastic deformation between quenching and aging for the purpose of raising the strength characteristics of alloy MA5 (7.5-9.3% Al, 0.2-0.8% Zn, 0.5% Mn, impurities no more than 0.25% Si, 0.15% Cu, 0.15% Fe, bal. Mg). Quenching was done from 415C by cooling in air; the plastic deformation consisted of the extension of special blank specimens from which samples were made for tensile tests. It was found that plastic deformation between quenching and aging produces a definite increase in strength characteristics, but at the expense of a decrease in plasticity. Changes in the structure

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L 45463-65

ACCESSION NR: AP5009273

of MA5 due to the deformation were studied by measuring the electrical resistance, by observing the microstructure, and by the x-ray method. A comparison of the results of mechanical tests and structural studies shows that the hardening of alloy MA5 by plastic deformation is due mainly to the formation of crystal lattice distortions which are characteristic of the work-hardened state. The decrease in hardening associated with a rise in the aging temperature or testing temperature is due to a partial elimination of these distortions, as was shown by x-ray analysis. Orig. art. has: 5 figures.

ASSOCIATION: None

SUBMITTED: 18Mar64 ENCL: 00 SUB CODE: MM

NO REF SOV: 014 OTHER: 000

Card 2/2

L 2154-66 EWT(m)/EWP(w)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) IJP(c) JD/HW/JG/
GS

ACCESSION NR: AT5023097 UR/0000/65/000/000/0235/0240

59
56
B+1

AUTHOR: Rokhlin, L. L.; Oreshkina, A. A.

44, 55, 27 44, 55, 27

TITLE: Effect of cerium and lanthanum on the mechanical properties of alloys of the magnesium-neodymium-manganese system

44, 55, 27 44, 55, 27 44, 55, 27

SOURCE: Problemy bol'shoy metallurgii i fizicheskoy khimii novykh splavov (Problems of large-scale metallurgy and physical chemistry of new alloys); k 100-letiyu so dnya rozhdeniya akademika M. A. Pavlova. Moscow, Izd-vo Nauka, 1965, 235-240

TOPIC TAGS: magnesium base alloy, neodymium, high temperature strength, cerium, lanthanum, metal heat treatment, solid mechanical property

ABSTRACT: Although neodymium is of great value in enhancing the high-temperature (200 - 300°C) strength of Mg-base alloys, it is a costly alloy element and hence the authors investigate the possibility of reducing the Nd content of alloys of the Mg-Nd-Mn system by using less scarce rare-earth metals -- Ce and La. Ingots of alloys with different proportions of these alloy elements (Nd 1.0-4.0%,

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L 2154-66

ACCESSION NR: AT5023097

3

Ce 0.3-1.2%, La 0.2-0.8%) were extruded into rods of 10.5 mm diameter and subjected to the following three different regimes of heat treatment: T5 -- aging at 175°C for 24 hr; T6 -- quenching from solid-solution temperature + aging at 175°C for 24 hr; T8 -- quenching from solid-solution temperature + plastic deformation + aging at 175°C for 8 hr, whereupon their yield strength and ultimate strength at temperatures of from 50 to 350°C were determined and their microstructure examined. Findings:whatever the regime of heat treatment, the strength characteristics of the alloys uniformly decreased on replacement of Nd with both Ce and La. Thus, at 250°C the ultimate strength σ_b of the alloy containing 1.2% Ce decreases to 11.2 kg/mm^2 compared with σ_b = 22.8 kg/mm^2 for the ternary alloy Mg-Nd-Mn and (at 250°C) up to 8.9 kg/mm^2 (for the regime T6) for the alloy containing 0.8% La. The highest values of the strength properties, both at room temperature and at elevated temperatures, were recorded for alloys heat-treated in the regime T8. The replacement of Nd with Ce and La reduced plasticity in hardened state, and hence in alloys containing 1% and less Nd a 10% plastic deformation in between quenching and aging could not be accomplished, since the specimens fractured during their tensile tests. The regime T8 is the most advantageous from the standpoint of obtaining high strength properties. Hence, the impossibility of

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L 2154-66
ACCESSION NR: AT5023097

applying this regime to alloys containing less than 1% Nd makes the idea of replacing Nd with Ce and La even less plausible. Furthermore, microstructural examination showed that alloys containing more than 1% Nd display a finer and more uniform-sized grain structure. This suggests that the high plasticity of Mg-Nd alloys in hardened state, so characteristic of these alloys, is associated with the presence of a fine grain structure with uniform grain size. Orig. art. has: 4 figures, 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 005 OTHER: 002

Card 3/3

BANSHCHIKOV, V.M., zasl. deyatel' nauki, prof., glav. red.; ROKHLIN, L.L., prof., zam. glav. red.; SHMIDT, Ye.V., prof., red.; KERBIKOV, O.V., prof., red.[deceased]; MYASISHCHEV, V.N., zasl. deyatel' nauki prof., red.; FELINSKAYA, N.I., prof. red.; MIKHEYEV, V.V., prof., red.; FEDOTOV, D.D., prof., red.; BABAYAN, E.M., red.; MOROZOV, G.K., doktor med. nauk, red.; SEREBRYAKOVA, Z.N., kand. med. nauk, red.; USHAKOV, G.K., doktor med.nauk, red.; SNEZHNEVSKIY, A.V., prof., red.

[Transactions of the 4th All-Union Congress of Neuropathologists and Psychiatrists] Trudy Vsesoiuznogo s"ezda nevropatologov i psikhiatrov. Moskva, Vses.nauchn. med. obvo nevropatologov i psikhiatrov. Vols.1, 5-6. 1965. (MIRA 18:11)

1. Vsesoyuznyy s"yezd nevropatologov i psikhiatrov. 4th, Moscow, 1963. 2. Deystvitel'nyy chlen AMN SSSR (for Shmidt, Kerbikov, Snezhnevskiy).

BANSHCHIKOV, V.M., zasl. deyatel' nauki prof., glav. red.; ROKHLIN, L.L., prof., zam. glav. red.; SNEZHNEVSKIY, A.V., prof., red.; ALEKSANDROVSKIY, Yu., red.

[Transactions of the 4th All-Union Congress of Neuropathologists and Psychiatrists] Trudy chervertogo Vsesoiuznogo s"ezda nevropatologov i psikhiatrov. Moskva, Vses. nauchn. med. ob-vo nevropatologov i psikhiatrov. Vols. 3-4. Nos.1-2.; Vol.8. 1965. (MIRA 18:12)

1. Vsesoyuznyy s"yezd nevropatologov i psikhiatrov. 4th, Moscow, 1963. 2. Chlen-korrespondent AMN SSSR (for Snezhnevskiy)

POZHLIN, L.I. (Moskva)

Significance of reserpine as a psychotropic drug. Trudy Gos. nauch.-issl. inst. psikh. 42:3-19 '65. (MIRA 18:9)

ROKHLIN, L.L. (Moskva)

S.S.Korsakov's psychological concepts. Trudy Gos. nauch.-issl. inst. psikh. 43:310-337 '65. (MIRA 18:9)

L 37169-66 EWT(m)/T/EWP(t)/ETI IJP(e) JH/JG/GD/JD

ACC NR: AT6016419 (A) SOURCE CODE: UR/0000/65/000/000/0125/0134

AUTHORS: Drits, M. Ye.; Sviderskaya, Z. A.; Gur'yev, I. I.; Rokhlin, L. L.; Oreshkina, A. A.

ORG: none

TITLE: Influence of temperature on the mechanism of plastic deformation of magnesium and magnesium alloy containing 3% neodymium

SOURCE: AN SSSR. Institut metallurgii. Metallovedeniye legkikh splavov (Metallography of light alloys). Moscow, Izd-vo Nauka, 1965, 125-134

TOPIC TAGS: magnesium, magnesium alloy, neodymium containing alloy

ABSTRACT: The effect of temperature and additions of neodymium on the mechanism of plastic deformation of magnesium was investigated. The investigation supplements the results of Ye. M. Savitskiy, V. F. Terekhova, I. V. Burov, I. A. Markova, and O. P. Naumkin (Splavy redkozemel'nykh metallov. Izd-vo AN SSSR, 1962). The magnesium specimens were annealed at 425—450C for one hour. Specimens containing 3% neodymium were heated to 535C, quenched in water, and aged at 200C for 8 hours. The microstructure of the specimens was studied as a function of the annealing temperature and degree of deformation. The nature of the plastic deformation is different at high temperatures compared with low temperatures. The addition of 3% Nd to magnesium shifts the transition of the low-temperature plastic deformation mechanism to the

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L 37169-66

ACC NR: AT6016419

high-temperature mechanism by approximately 100C. It is concluded that the strengthening effect due to lattice deformation (which results from cold plastic deformation) persists up to 350C. Orig. art. has: 3 photographs.

SUB CODE: 11/ SUBM DATE: 16Sep65/ ORIG REF: 010/ OTH REF: 011

Card 2/2 af

ACC NR: AM5025169 Monograph UR/

Sviderskaya, Zoya Andreyevna; Rokhlin, Lazar' Leonovich

Magnesium alloys containing neodymium (Magniyeviyye splavy, soderzhashchiye neodim) Moscow, Izd-vo "Nauka" 1965. 137 p. illus., biblio., plates. 2000 copies printed.

TOPIC TAGS: magnesium, magnesium alloy, neodymium containing alloy, rare earth metal

PURPOSE AND COVERAGE: This monograph is intended for scientists and engineers of research institutes and plant laboratories working on the investigation, testing, and production of magnesium alloys. The booklet can be useful either for teaching personnel or students of metallurgical colleges. The monograph presents the authors' experimental material and data from technical literature on the structure and properties of magnesium alloys containing neodymium as the main alloying element. Phase diagrams of magnesium alloys and the effect of additional alloying on the structure and properties of magnesium-neodymium alloys are presented. Much attention was paid to the thermomechanical treatment of these alloys.

TABLE OF CONTENTS:

UDC: 669.721.5+669.857

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ACC NR: AP5025169

SUB CODE: 11/ SUBM DATE: 26Apr65/ ORIG REF: 114/ OTH REF: 059/

Card 2/2

ACC NR: AT6034461 (A) SOURCE CODE: UR/0000/66/000/000/0237/0244

AUTHOR: Dritz, M. Ye.; Sviderskaya, Z. A.; Rokhlin, L. L.

ORG: none

TITLE: Improvement of the properties of heat resistant magnesium alloys

SOURCE: AN SSSR. Institut metallurgii. Svoystva i primeneniye zharoprochnykh splavov (Properties and application of heat resistant alloys). Moscow, Izd-vo Nauka, 1966, 237-244

TOPIC TAGS: magnesium containing alloys, neodymium containing alloy, mechanical heat treatment

ABSTRACT: A significant improvement in the strength of heat resistant magnesium alloys containing neodymium has been achieved by the use of low temperature thermomechanical working, followed by hardening, cold plastic deformation, and subsequent artificial aging. This has permitted a considerable improvement in the mechanical properties of alloys of the systems Mg-Nd, Mg-Nd-Mn, and Mg-Nd-Mn-Ni. The mechanical properties were determined on samples prepared from hot pressed rods. Hardening was done at a temperature of 535°C, with a holding time of 4 hours. Cold deformation was done by elongation on a IM-4R machine, which was also used for determining the mechanical properties. Artificial aging was done for 24 hours at a

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ACC NR: AT6034461

temperature of 175°. A table shows the mechanical properties of a magnesium alloy with 3% Nd at different temperatures. Further tables and figures show the experimental data on the effect of the degree of deformation and the effect of high temperature thermomechanical working on the mechanical properties at different temperatures. Microphotos show the microstructure of alloys of magnesium with neodymium. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 11/ SUBM DATE: 10Jun66/ ORIG REF: 021/ OTH REF: 004

Card 2/2

ACC NR: AP6030421 SOURCE CODE: UR/0126/66/022/003/0420/0423

AUTHOR: Sokolin, L. L.; Oreshkina, A. A.

ORG: Institute of Metallurgy im. A. A. Baykov (Institut metallurgii)

TITLE: Investigation of the structure of Mg-3% Nd alloy subjected to high-temperature plastic deformation

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 3, 1966, 420-423

TOPIC TAGS: magnesium neodymium alloy, ~~alloy~~ plastic deformation, ~~alloy~~ thermomechanical treatment, ~~magnesium containing alloy~~, alloy structure, tensile strength, mechanical property, yield stress

ABSTRACT: The effect of thermomechanical treatment (TMT) on the strength and structure of magnesium-base alloy containing 3% neodymium has been studied. Hot-extruded alloy bars were solution annealed at 535C, air cooled to 420—260C, and extruded at these temperatures with a reduction of 80%. TMT at 260C increased the tensile strength to 34—35 kg/mm^2, the yield strength to 28—32 kg/mm^2, and lowered the elongation to 1.5—2.5%. Compared to 24—26 kg/mm^2, 11.5—16 kg/mm^2, and 10—13% respectively for conventionally heat-treated (solution annealed at 535C and aged at 200C for 8 hr) alloy. TMT with deformation at 350C produced the best combination of mechanical properties: a tensile strength of 25—29 kg/mm, a yield strength of 18—23 kg/mm^2, and an elongation of 8—16%. TMT at 420C yielded

 UDC: 669.72.548.4

ACC NR: [illegible]

mechanical properties roughly equal to those of the conventionally heat treated alloy. The decrease of alloy strength with increasing deformation temperature can be explained by progressing recrystallization and coagulation of particles of the Mg_3Nd phase. The authors thank M. Ye. Drits and Z. A. Svidersky for their assistance. Orig. art. has: 2 figures.

SUB CODE: 11, 13/ SUBM DATE: 26Jul65/ ORIG REF: 008/

Card 2/2

ROKHLIN, L. L. ed.

Problems of clinical and experimental neuropathology and psychiatry; jubilee publication dedicated to the 30th anniversary of Aleksandr Mikhailovich Grinshtein's scientific, medical pedagogical and social work. Khar'kov, Izd-vo. Ukrainskoi psikhonevrologicheskoi Akademii, 1936. 473 p.

DA'F

1. Psychiatry.
2. Grinshtein, Aleksandr Mikhailovich.

BOKIY, V. N.

34215. Psikhogennoye i somatogennoye v proiskhozhdenii i Klinicheskom Formirovanii psikhicheskikh narusheniy pri serdechno-sosudistykh zabolevaniyakh. V sb: Problemy Kortiko-vistseral'noy patologii. M., 1949, s. 270-300

SO: Knizhnaya Letopis' No 6, 1955

ROKHLIN, L. L.

"Sleep, Hypnosis, and Dreams in the light of I.P. Pavlov's Teaching."
Son, Gipnoz i snovideniya v svete ucheniya I.P.Pavlova, Series II, No 52, pp 3- 39, 1952.

ROKHLIN, L. L.

Relation of psychogenia to schizophrenia..Zh. nevropat. psikhiat., Moskva 52 no.5:26-30 May 1952. (CLML 22:2)

1. Professor.

ROKHLIN, L.L.

ROKHLIN, L.L.

[Soviet science in the fight against mental diseases] Sovetskaia nauka v bor'be s psikhicheskimi bolezniami. Moskva, Institut sanitarnogo prosveshchenila ministerstva zdravookhraneniia SSSR, 1953. 100 p. (MIRA 8:3)

(Mental hygiene)

KORSAKOV, Sergey Sergeyevich, psikhiatr; BANSHCHIKOV, V.M., professor; POPOV, V.A., professor; ROKHLIN, L.L., redaktor; SENCHILO, K.K., tekhnicheskiy redaktor.

[Selected works] Izbrannye proizvedeniia. Moskva, Gos. izd-vo med. lit-ry, 1954. 770 p. (MIRA 7:7)

1. Chlen-korrespondent AMN SSSR (for Popov)
(Psychiatry)

ROKHLIN, L.L. (Moskva)

S.S. Korsakov (1854-1900). Med.sestra no.8:24-27 Ag '54.
(KORSAKOV, SERGEI SERGEEVICH, 1854-1900) (MIRA 7:8)

ROKHLIN, L.L.

S.S.Korsakov's manuscript "Hypochondria gravis." Zhur.nevr.i psikh. 54 no.2:95-97 F '54. (MLRA 7:3)
(Korsakov, Sergei Sergeevich, 1854-1900) (Hypochondria)

ROKHLIN, L.L.

[Soviet medicine in the struggle against psychic disorders; a popular scientific sketch] Sovetskaya meditsina v bor'be s psikhicheskimi boleznyami; nauchno-populyarnyy ocherk. Izd. 2, perer. i dop. Moskva, Medgiz, 1956. 104 p. (MLRA 10:2)
(PSYCHIATRY)

ROKHLIN, L.L.

Principles of pharmacotherapy of disorders in the higher nervous activity of mental patients. Fiziol.zhur. [Ukr.] 2 no.4:36-42 Jl-Ag '56. (MLRA 9:10)

1. Kuybyshevskiy meditsinskiy institut.
(PHARMACOLOGY) (PSYCHIATRY)

ROKHLIN, L.L., professor (Kuybyshev)

Psychic factor in internal diseases. Terap.arkh. 28 no.8:3-9 '56.
(MLRA 10:2)

(PSYCHOLOGY
psychic factor in etiol. & pathogen. of internal dis.)

ROKHLIN, L.L.

Problems of somatopsychic relations in the works of E.K.Krasnushkin.
Zhur.nevr. i psikh. 56 no.6:508-509 '56. (MLRA 9:8)
(KRASNUSHKIN, EVGENII KONSTANTINOVICH, d.1956)
(MEDICINE, PSYCHOSOMATIC
contribution of Evgenii K.Krasnushkin)

ROKHLIN, L.L., prof. (Kuybyshev), otv.red.; BANSHCHIKOV, V.M., prof. (Moskva), red.; VORONOV, D.A., red.; YEROSHEVSKIY, T.I., prof., red.; ZLOTOBEROV, A.I., prof. (Kuybyshev); CHERKASOV, M.F., tekhn.red.; BELOTSERKOVSKIY, N.I., tekhn.red.

[Current problems in neuropathology and psychiatry] Aktual'nye problemy nevropatologii i psikhiatrii. Trudy. Kuibyshev, 1957. 566 p. (Gosudarstvennyi nauchno-issledovatel'skii institut psikhiatrii MZ RSFSR. Trudy, vol. 16; Kuibyshevskii gosudarstvennyi meditsinskii institut. Trudy, vol.9).

(MIRA 13:12)

1. Mezhoblastnoye soveshchaniye nevropatologov i psikhiatrov Povolzh'ya i primykayushchikh oblastey, 1956.

(NERVOUS SYSTEM--DISEASES) (PSYCHIATRY)

Country : USSR
Category : Pharmacology and Toxicology. Tranquilizers

Abs. Jour. : Ref Zhur-Biol, No 19, 1958, No 89799

Author : Rokhlin, L. L.; Peskova, M. V.; Bakhar, Z. P.
Institut. : -
Title : Experiences with Aminazin Therapy in Schizophrenia

Orig Pub. : V sb.: Aktual'n. probl. nevropatol. i psikhiatrii. Kuybyshev, 1957, 361-367

Abstract : As a result of a massive course of therapy of 47 schizophrenic patients with Aminazin /chlorpromazine/ (effective daily doses of 200-500 mg.), with subsequent maintenance therapy by the same drug, permanent improvement was noted in the majority of the patients: tension decreased, behavior became adequate; a decrease in hallucinatory sensations and ideas of action was noted. In order to stop psychomotor excitation, Aminazin was combined with small doses

Card: 1/2

ROKHLIN, L.L., prof. (Kuybyshev)

Awareness of illness and its significance in clinical pracitce.
Klin.med. 35 no.9:11-20 S '57 (MIRA 10:11)
(DISEASE, psychol.
eff. of dis. psychol. & eff. of higher nerv. funct. on dis.)
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eff. of higher nerv. funct. on dis. & eff. of dis. on higher nerv. funct.)

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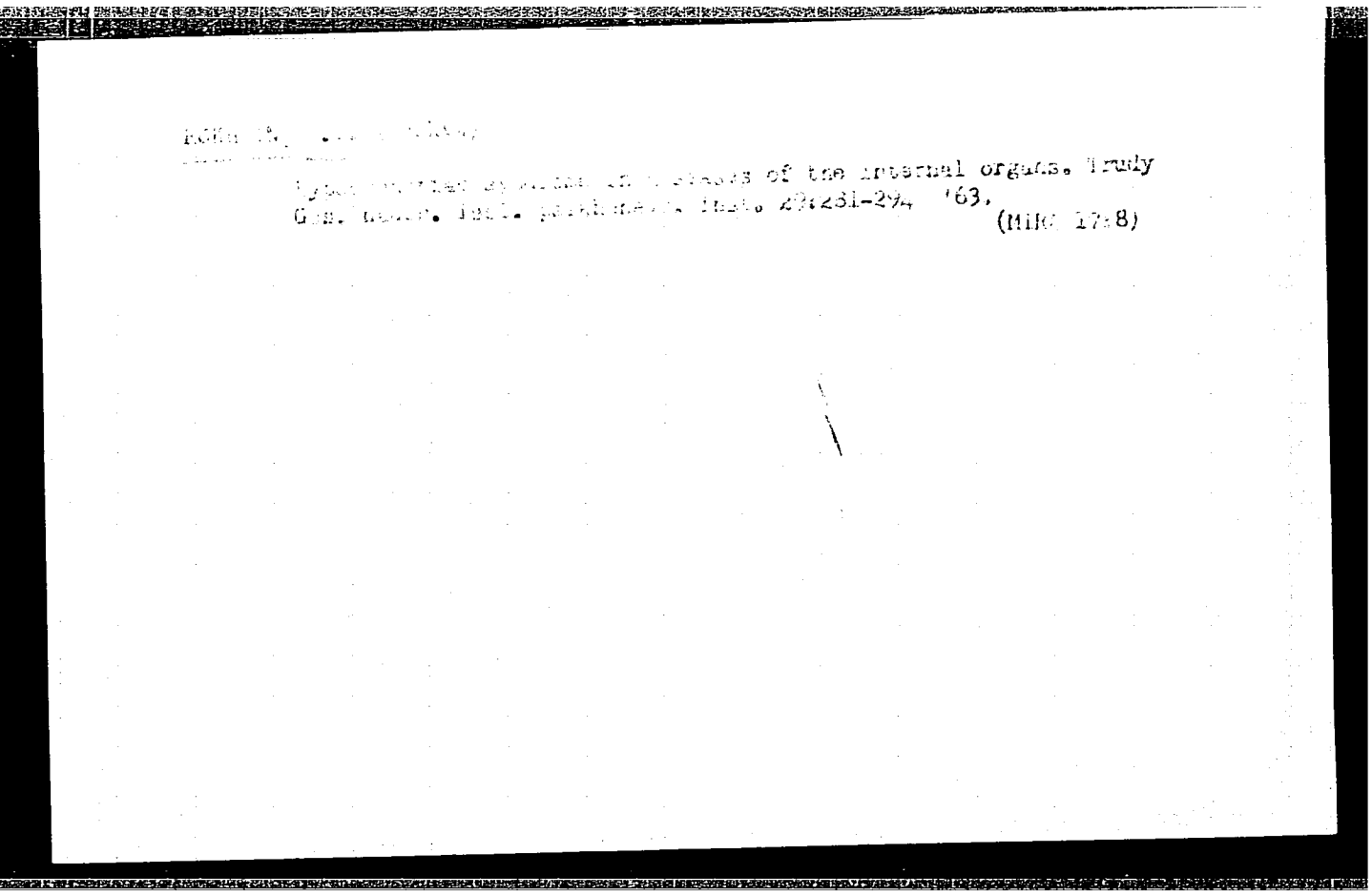

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